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09/916,047	07/25/2001	Robert S. Daley	010278	7282

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Qualcomm Incorporated  
Patents Department  
5775 Morehouse Drive  
San Diego, CA 92121-1714

EXAMINER

PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/916,047

Applicant(s)

DALEY ET AL.

Examiner

Justin M Philpott

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 7-10,13-17,21-23 and 51-56 is/are pending in the application.
- 4a) Of the above claim(s) 56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-10,13-17,21-23 and 51-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. In view of the Appeal Brief filed on June 3, 2004, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

### ***Claim Objections***

2. Claims 7, 51 and 56 are objected to because of the following informalities: “the first communication device” (claim 7, lines 9-10) should be changed to “a first communication device” since a specific first of the plurality of communication devices has not yet been introduced in the claim; “from the selector base station” (claim 51, line 13) should be changed to “at the selector base station”; “informing ... receiving ... and relaying” (claim 56, lines 9-11) should be changed to “informs ... receives ... and relays” in order to remain consistent with the remainder of the claim. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 7-10, 13-17, 21-23 and 51-56 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Specifically, claim 7 recites “a selector entity in communication with the access points” (line 7) and “wherein the selector entity receives first communication device frames from the first access point” (lines 8-9). Applicant’s specification identifies the access point as a base station BTS (paragraph 0009 and 0023) and applicant’s Figure 1 shows the invention comprises BTS1 and BTS2 communicating with wireless telephone 12 via OTA protocol and communicating with Infrastructure 14 via Internet Protocol. Further, applicant discloses a “selector base station”, or access point with selection functionality (paragraph 0012), and further discloses that one of the access points have frame selecting responsibility (paragraph 0030). Still further, applicant specifically recites, “the ‘selector entity’ referred to herein is implemented by one or more [access points]” (paragraph 0039). Claim 7, however, implies that the selector entity is *not* implemented within or by the access points, but rather is a separate external device performing selection functionality outside of the access points. This limitation of claim 7

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contradicts the teachings in applicant's specification. Thus, claim 7 fails to comply with the enablement requirement. For the purpose of art rejections in the following action, claim 7 is understood to instead refer to "a selector entity, within the first access point, in communication with other access points, wherein the selector entity receives first communication device frames received by the first access point".

Claims 8 and 9 depend upon claim 7 and are therefore rejected for the same reasons discussed above.

Claim 10 recites, "selecting frames ... at the first base station ... and sending the selected frames to a selector entity ..., the selector entity informing a second base station to send frames received thereby to the selector entity". As discussed above regarding claim 7, applicant's specification teaches that "the 'selector entity' referred to herein is implemented by one or more [access points]" (paragraph 0039). Claim 10, however, implies that the selector entity is *not* implemented within or by the access points, but rather is a separate external device performing selection functionality outside of the access points. This limitation of claim 10 contradicts the teachings in applicant's specification. Thus, claim 10 fails to comply with the enablement requirement. For the purpose of art rejections in the following action, claim 10 is understood to instead refer to "sending the selected frames to a selector entity within the first base station when a first threshold is reached".

Claims 13-16 depend upon claim 10 and are therefore rejected for the same reasons discussed above.

Claim 17 recites "sending the selected frames to a selector entity when a first threshold is reached" (lines 8-9) and "send frames thereby to the selector entity ... upon

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reaching a second threshold” (lines 11-12). As discussed above, applicant’s specification specifically requires that “the ‘selector entity’ referred to herein is implemented by one or more CAPs [access points]” (paragraph 0039). Claim 17, however, implies that the selector entity is *not* implemented within or by the access points, but rather is a separate external device performing selection functionality outside of the access points. This limitation of claim 17 contradicts the teachings in applicant’s specification. Thus, claim 17 fails to comply with the enablement requirement. For the purpose of art rejections in the following action, claim 17 is understood to instead refer to “sending the selected frames to a selector entity, within the selector base station, when a first threshold is reached” and “send frames received thereby to the selector entity within the selector base station”.

Claims 21-23 depend upon claim 17 and are therefore rejected for the same reasons discussed above.

Claim 51 recites “sending the selected frames to a selector entity when a first threshold is reached” (lines 8-9) and “send frames received thereby to the selector entity ... upon reaching a second threshold” (lines 11-12). As discussed above, applicant’s specification specifically requires that “the ‘selector entity’ referred to herein is implemented by one or more CAPs [access points]” (paragraph 0039). Claim 51, however, implies that the selector entity is *not* implemented within or by the access points, but rather is a separate external device performing selection functionality outside of the access points. This limitation of claim 51 contradicts the teachings in applicant’s specification. Thus, claim 51 fails to comply with the enablement requirement. For the purpose of art rejections in the following action, claim 51 is understood to instead refer to

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“sending the selected frames to a selector entity, within the selector base station, when a first threshold is reached” and “send frames received thereby to the selector entity within the selector base station”.

Claims 52-54 depend upon claim 51 and are therefore rejected for the same reasons discussed above.

Claim 55 recites “a selector entity in communication with the access points” (line 7) and “wherein ... the selector entity: receives information from the first access point; informs a second access point to send frames received thereby to the selector entity ... [and] receives information from the second access point” (lines 8-11). However, as discussed above, applicant’s specification requires that “the ‘selector entity’ referred to herein is implemented by one or more [access points]” (paragraph 0039). Claim 55, however, implies that the selector entity is *not* implemented within or by the access points, but rather is a separate external device performing selection functionality outside of the access points. This limitation of claim 55 contradicts the teachings in applicant’s specification. Thus, claim 55 fails to comply with the enablement requirement. For the purpose of art rejections in the following action, claim 55 is understood to instead refer to “a selector entity, within the first access point, in communication with other access points” and “wherein ... the selector entity: receives information received by the first access point”.

Claim 56 recites “a selector entity in communication with the first base station” (lines 7-8). As discussed above, applicant’s specification specifically requires that “the ‘selector entity’ referred to herein is implemented by one or more CAPs [access points]” or base stations (paragraph 0039). Claim 56, however, implies that the selector entity is

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*not* implemented within or by the access points, but rather is a separate external device performing selection functionality outside of the access points. This limitation of claim 56 contradicts the teachings in applicant's specification. Thus, claim 56 fails to comply with the enablement requirement. For the purpose of art rejections in the following action, claim 56 is understood to instead refer to "a selector entity within the first base station".

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 7-10, 13-17, 21-23 and 51-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claim 7 recites "informs a second access point to send frames ... when a first threshold is reached" (lines 10-11). However, the remainder of claim 7 fails to disclose to what the threshold corresponds (e.g., a signal strength of a frame received, a quantity of frames received, a period of time between received frames, etc.). Thus, claim 7 is rejected for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claim 8 depends upon claim 7 and recites "wherein the selector entity assumes frame selection for the first communication device when a second threshold is reached". However, in claim 7, the selector entity is already performing frame selection for the first communication device. Thus, the further limitation of assuming the frame selection when a second threshold is reached is unclear.



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Furthermore, the remainder of claim 8 fails to disclose to what the threshold corresponds (e.g., a signal strength of a frame received, a quantity of frames received, a period of time between received frames, etc.). Thus, the recitation of “threshold” renders the claim indefinite. Still further, claim 8 recites “the selector entity... informs the second access point to propose frame selections for the first communication device and forward the frame selections to the selector entity”. It is unclear as to how this “propose” step is enabled and/or if it is the same step as the “forward” step. Accordingly, claim 8 is rejected for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 is rejected for its dependency on the rejected claims 7 and 8 discussed above, and further, claim 9 similarly recites “frame selections proposed by the second access point” which is unclear. Further, the phrase “predetermined correctness threshold” is unclear.

Claim 10 recites “sending the selected frames ... when a first threshold is reached”. However, the remainder of claim 10 fails to disclose to what the threshold corresponds (e.g., a signal strength of a frame received, a quantity of frames received, a period of time between received frames, etc.). Thus, the recitation of “threshold” renders the claim indefinite.

Claim 13 is rejected for its dependency on the rejected claim 10 discussed above, and further, claim 13 recites “assuming frame selection for the communication device at the selector entity when a second threshold is reached”. However, in claim 10, the selector entity is already performing frame selection for the first communication device. Thus, the further limitation of assuming the frame selection when a second threshold is

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reached is unclear. Furthermore, the remainder of claim 13 fails to disclose to what the second threshold corresponds (e.g., a signal strength of a frame received, a quantity of frames received, a period of time between received frames, etc.). Thus, the recitation of “threshold” renders the claim indefinite.

Claim 14 is rejected for its dependency on the rejected claims 10 and 13 discussed above, and further, claim 14 recites “proposing frame selections ... at the second base station; and forwarding the frame selections to the selector entity”. It is unclear as to how this “proposing” step is enabled and/or if it is the same step as the “forwarding” step. Accordingly, claim 14 is rejected for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 15 and 16 are rejected for its dependency on the rejected claims 10, 13 and 14 discussed above, and further, claim 15 recites the phrase “predetermined correctness threshold” which is unclear.

Claim 17 recites “sending the selected frames ... when a first threshold is reached” (lines 8-9) and “informing ... upon reaching a second threshold”. However, the remainder of claim 17 fails to disclose to what the thresholds correspond (e.g., a signal strength of a frame received, a quantity of frames received, a period of time between received frames, etc.). Thus, claim 17 is rejected for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 depends upon claim 17 and recites “assuming frame selection for the communication device at the selector entity when the second threshold is reached”. However, in claim 17, the selector entity is already performing frame selection for the

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communication device. Thus, the further limitation of assuming the frame selection when a second threshold is reached is unclear. Furthermore, the remainder of claim 21 fails to disclose to what the second threshold corresponds (e.g., a signal strength of a frame received, a quantity of frames received, a period of time between received frames, etc.). Thus, the recitation of "threshold" renders the claim indefinite.

Claim 22 is rejected for its dependency on the rejected claims 17 and 21 discussed above, and further, claim 22 recites "propose frame selections ...; and ... forwarding the frame selections to the selector entity". It is unclear as to how this "proposing" step is enabled and/or if it is the same step as the "forwarding" step. Accordingly, claim 22 is rejected for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 is rejected for its dependency on the rejected claims 17, 21 and 22 discussed above, and further, claim 23 recites the phrase "predetermined correctness threshold" which is unclear.

Claim 51 recites "sending the selected frames ... when a first threshold is reached" (line 8-9) and "informing ... upon reaching a second threshold". However, the remainder of claim 51 fails to disclose to what the thresholds correspond (e.g., a signal strength of a frame received, a quantity of frames received, a period of time between received frames, etc.). Thus, claim 51 is rejected for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 52 depends upon claim 51 and recites "assuming frame selection for the communication device at the selector entity when the second threshold is reached".

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However, in claim 51, the selector entity is already performing frame selection for the communication device. Thus, the further limitation of assuming the frame selection when a second threshold is reached is unclear. Furthermore, the remainder of claim 52 fails to disclose to what the second threshold corresponds (e.g., a signal strength of a frame received, a quantity of frames received, a period of time between received frames, etc.). Thus, the recitation of "threshold" renders the claim indefinite.

Claim 53 is rejected for its dependency on the rejected claims 51 and 52 discussed above, and further, claim 53 recites "propose frame selections ...; and ... forwarding the frame selections to the selector entity". It is unclear as to how this "proposing" step is enabled and/or if it is the same step as the "forwarding" step. Accordingly, claim 53 is rejected for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 54 is rejected for its dependency on the rejected claims 51-53 discussed above, and further, claim 54 recites the phrase "predetermined correctness threshold" which is unclear.

Claim 55 recites "when a first threshold is reached" (line 6-7). However, the remainder of claim 55 fails to disclose to what the threshold corresponds (e.g., a signal strength of a frame received, a quantity of frames received, a period of time between received frames, etc.). Thus, claim 55 is rejected for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 56 recites "when a first threshold is reached" (line 7). However, the remainder of claim 56 fails to disclose to what the thresholds correspond (e.g., a signal

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strength of a frame received, a quantity of frames received, a period of time between received frames, etc.). Thus, claim 56 is rejected for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 7-10, 13-17, 21-23 and 51-56 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0093931 by Dalal.

Regarding claims 7, 10, 17, 51, 55 and 56, Dalal teaches a voice over Internet VOIP system (e.g., see Internet 240 coupled to MSC 140 in FIG. 3) comprising: plural access points (e.g., BS 101-103 in FIG. 1) communicating with plural wireless communication devices (e.g., MS 111-114) using a wireless communication device over-the-air protocol different from Internet protocol IP (e.g., CDMA, see paragraphs 0023-0024), each wireless communication device (e.g., MS 111-114) transmitting frames of information (e.g., see paragraph 0028 regarding communication with BS, wherein communication is inherently frames of information), at least a first access point (e.g., one of BS 101-103) undertaking selection functionality including frame selection (e.g., see

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SDU 310 comprising frame selection unit 311 and contained within BS 101; see also paragraphs 0037-0042) and handoff control (e.g., see paragraph 0029 regarding handoff from BS 101 to BS 103 wherein BS 103 comprises functionality for establishing a new communication link; see also paragraphs 0043-0044 regarding radio dependent functions including soft handoff operations are performed by BS 101-103); and a selector entity (e.g., selection and distribution unit SDU 310) is in communication with the access points (e.g., BS 101-103, see FIG. 3) and the selector entity (e.g., SDU 310) receives first communication device (e.g., MS 111-114) frames from the first access point (e.g., BS 101), monitors frame selection by the first access point (e.g., senses signal strength of BS 101, see paragraphs 0029 and 0038) for a first communication device (e.g., MS 112), and informs, before handing off to (via control signals, see paragraph 0029), a second access point (e.g., BS 103) to send frames received thereby to the selector entity (e.g., SDU 310) when a first and/or second threshold is reached (e.g., when the signal strength of BS 101 is unacceptably weak, and when signal strength of BS 103 is an acceptable level, inherent thresholds in the system of Dalal).

Further, regarding claims 55 and 56, Dalal teaches relaying information frames received from the second access point (e.g., BS 103) to the first access point (e.g., BS 101) for continued frame selection (e.g., via SDU 310) at the first access point (e.g., BS 101) (e.g., see paragraph 0038 regarding frame selection unit 311 transferring signaling traffic frames to and from BS 101 and to and from BS 102 and BS 103).

Regarding claims 8, 13, 14, 21, 22, 52 and 53, Dalal teaches a selector entity (e.g., SDU 310) assumes frame selection (e.g., via frame selection unit 311) when a second threshold is reached (e.g., when the signal strength received from a second of BS 101-103

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exceeds that of a first of BS 101-103, or similarly, when the signal strength received from the first of BS 101-103 is less than that received from other BSs, functionality inherent in the operation of the system of Dalal), and informs the second access point (e.g., BS 103) to propose frame selections for the first communication device (e.g., MS 112) and forwards the frame selections to the selector entity (e.g., SDU 310) for monitoring thereby (e.g., see paragraph 0044 wherein Dalal specifies that frame selection units are located in all of BS 101-103).

Regarding claims 9, 15, 16, 18, 23 and 54, Dalal teaches the selector entity (e.g., SDU 310) determines whether frame selections from a second access point (e.g., BS 103) are within a predetermined correctness threshold (e.g., are within suitable signal strength range) and if so, causing the second access point (e.g., BS 103) to assume frame selections for the first communication device (e.g., MS 112, see paragraphs 0029 and 0038 regarding handoff and see paragraph 0044 wherein Dalal specifies that frame selection units are located in all of BS 101-103).

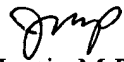
### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Justin M Philpott



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